

REMARKS

Reconsideration of the application is requested.

Claims 1-5, 7-28, 30-46, 93, and 94 are now in the application. Claims 1 and 24 have been amended. Claims 93 and 94 have been added. *Claims 6, 29, and 47-92 have been canceled to facilitate prosecution of the instant application.*

Applicants appreciatively acknowledge the Examiner's withdrawal of the rejection in "Claim Rejections - 35 USC § 101" on page 4 of the above-identified final Office Action.

In "Drawings" on page 2 of the above-identified final Office Action, the Examiner objected to the drawings because "each and every recited feature" must be shown in the drawings. More specifically, the above-identified final Office Action indicates "transmitting ...", "region defining a given time slot", "specific information", and "settings selected from the group consisting of ..." each of which are allegedly not shown in the drawings and as such should either be shown or canceled from the claims. Applicant respectfully traverses the Examiner's position, as Fig. 1 shows a system with devices connected via a multi-master bus and Fig. 2 shows a format of a message or of a frame following a defined

protocol for the various bit fields according to the present invention.

As the message format or frame is explicitly used by the various nodes (N1-Nn) on the multi-master bus to transmit data, applicants respectfully note that "transmitting" is clearly shown. Moreover, Fig. 1 uses bi-directional arrows, which would be clearly understood by one of skill in the art to mean "transmitting", to connect the devices on the bus.

The feature "region defining a given time slot" is shown in both Fig.1 and Fig. 2. More specifically, the format shows various fields, among them the reply field, labeled REPLY in Fig. 2, defines a time slot in which the devices which are not bus master "can, or must output data onto the bus." In this way the reply field is clearly "defining a given time slot" as recited in the claims. Moreover, the specification also clarifies that Fig. 1 shows that the various devices can output onto the bus based on the message format.

The feature "specific information" is the item being output onto the bus by the second and third devices, which is part of the REPLY field that was previously discussed and is clearly illustrated in Fig. 2. Moreover, the substitute specification provides exemplary "information which is

transmitted via the bus in the time slot defined by the reply field" on page 22 of the previously submitted amendment. It would be clear to one of skill in the art that a portion of the message dictates how or what is to be done with or to the "specific information" potentially contained in the REPLY field.

The feature "settings selected from the group consisting of ..." are preferably made in the respective devices (N1-Nn), which are shown in Fig. 1, so that the respective devices can output onto the bus independently without requiring triggering or authorization by the device controlling the bus allocation. The applicants respectfully request that the Examiner review the replacement specification provided on pages 22-25 of the previously submitted amendment, which discusses in detail some of the settings regarding the reply field, for further clarification regarding these items.

In "Specification" on page 3 of the above-identified final Office Action, the Examiner objected to the title because it was allegedly "not descriptive." The Examiner's suggested corrections have been made to the amended title, "Method Of Transmitting Data Between Devices Connected Via A Multi-Master Bus Defining A Time Slot During Transmission For Responsive Output Information From Non-Bus Master Devices".

Additionally, applicants appreciatively acknowledge the Examiner's withdrawal of the rejection under 35 U.S.C. § 112, second paragraph in "Claim Rejections - 35 USC § 112" and the entry of the substitute specification filed February 23, 2004 in "Specification" on page 3 of the above-identified final Office Action.

In "Claim Rejections - 35 USC § 112" on page 3 of the above-identified final Office Action, claims 1-92 have been rejected as being indefinite under 35 U.S.C. § 112, first paragraph.

More specifically, the Examiner states that the method and apparatus for forming the units and defining or determining settings as described in claims 1, 24, 47, and 70 "has no basis for enablement in the specification." Moreover, the Examiner states that "there is inadequate disclosure of the means by which units are formed." Applicants respectfully traverse.

In the applicants' description numerous specific details with regards to the frames or messages are set forth. However, it is also understood that embodiments of the invention may be practiced without these specific details. In other instances, well-known hardware and software modules,

structures, and techniques have not been shown in detail in order not to obscure the understanding of this description.

The operations of a bus or multi-master bus are both well known to those of skill in the art. Moreover, such generally known operations would also clearly include the general process of "transmitting data" and "receiving data" across a bus. As such, the enabling description necessary for the applicants to provide is how the invention varies from the known state of the art. Indeed, the very "description of frames" mentioned by the Examiner provides the description of the unique "regions" or "fields" of the messages, which are used to allow for responsive output information from non-bus master devices as disclosed by the present invention.

More specifically, the allegedly "inadequate disclosure of the means by which units are formed" can actually be found in the specification in the description of the REPLY field. Moreover, the use of the terminology "partly with at least one region defining a given time slot" provides for the fact that in addition to the REPLY field, other fields, such as the CTRL field and the SYN field, can affect the length and frequency of the given time slot used for responsive output.

If the description provided above is insufficient to assist the Examiner with regards to previously identified rejections, applicant would appreciate a list of specific examples of "limitations that lack enablement" or of exemplary "supporting disclosure that would enable the invention" as understood by the Examiner.

It is accordingly believed that the specification and the claims meet the requirements of 35 U.S.C. § 112, first paragraph. The above-noted changes to the claims are provided solely for clarification or cosmetic reasons. The changes are neither provided for overcoming the prior art nor do they narrow the scope of the claim for any reason related to the statutory requirements for a patent.

In "Claim Rejections - 35 USC § 102" on page 4 of the above-identified Office Action, claims 1-6, 8-29, 31-51, 53-74, and 76-92 have been rejected as being fully anticipated by U.S. Patent No. 6,347,097 to *Deng* (hereinafter **DENG**) under 35 U.S.C. § 102(e).

In "Claim Rejections - 35 USC § 103" on page 8 of the above-identified final Office Action, claims 7, 30, 52, and 75 have been rejected as being obvious over **DENG** in view of U.S.

Patent No. 6,212,633 to Levy, et al. (hereinafter **LEVY**) under 35 U.S.C. § 103(a).

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. Support for the new claims 93 and 94 emphasizing the "variable" nature of the settings of the given time slot may be found in canceled claims 6 and 29 of the instant application. Support for the other changes is found among other locations on pages 19-24 of the specification of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, a method of transmitting data between devices interconnected via a bus including:

transmitting data and information from a first device to one or more second devices to which the data does not concern, and one or more third devices to which the data does concern;

forming the units with at least one region defining a given time slot within which the second and third devices can output onto the bus specific information and/or data; and

defining, in the second and third devices, settings under which information and/or data are to be output within the given time slot selected from a setting to determine conditions for the output, which information and/or data are to be output, or points in time for the output.

New claim 93 calls for, *inter alia*, a method of transmitting data between devices interconnected via a bus including:

transmitting data and information from a first device to **second devices to which the data does not concern**, and/or **third devices to which the data does concern**;

forming the units at least partly with at least one region **defining a given time slot within which the second and/or third devices can output onto the bus** specific information and/or data; and

defining, in the second and third devices enabled for outputting data within the given time slot, **variable settings of the given time slot** selected from the group consisting of a setting to determine under which conditions information and/or data are to be output within the given time slot, a setting to determine which information and/or data are to be output within the given time slot, and a setting to determine at which points in time within the time slot the information and/or data are to be output.

New claim 94 calls for, *inter alia*, a method of transmitting data between devices interconnected via a bus including:

transmitting data and information from a first device to one or more second devices, to which the data is not intended and/or one or more third devices, to which the data is intended;

forming the units with at least one region defining a given time slot **within which the one or more second and/or third devices can output onto the bus** information and/or data; and

defining, in the first device, variable settings of the given time slot selected from the group consisting of a setting to determine which other devices have to output information and/or data within the given time slot, a setting to determine which information and/or data are to be output within the given time slot by the other devices, and a setting to determine at which points in time the given time slot the other device have to output the respective information and/or data.

The **DENG** reference discloses a method and apparatus for buffering received packetized data from a serial bus. The initiation of receipt of a given packet of data is first recognized, and then storage thereof initiated by storing the received data from the packet in a first packet data storage location in a FIFO. Subsequent received data is then stored in additional packet data storage locations in the FIFO as they are received. **The end of a given packet data** is then recognized and, after this event, a packet token is generated. The packet token contains **information as to the packet data storage locations within the FIFO** associated with the packet data. This packet data token is stored in the FIFO in such a manner that, upon reading a packet of data by a host system from the FIFO, the packet token will be read first to provide information to the host system as to the packet data storage locations of the remaining data in the stored packet. (col. 2, lines 31-44).

DENG does not show transmitting data together with information concerning at least one of a transmission and a use of the data during a given time slot for output of responsive information by other devices on the bus. Nor does **DENG** teach or suggest forming the units with at least one region defining a given time slot within which the one or

more second devices or third devices can output onto the bus specific "transmission" or "use" information or data as recited in claims 1, 24, 93, and 94 of the instant application.

Clearly, **DENG** does not show "defining...variable settings" as recited in claims 1, 24, 93, and 94 of the instant application. Rather **DENG** provides an arbitration sequence, which is transmitted by a node desiring to transmit a packet. More specifically, **DENG** transmits the arbitration sequence to the physical layer 54 to gain control of the bus. Contrary to the Examiner's assertion, the physical layer "may then respond immediately if it already controls the bus" does not show variable settings being communicated between devices on the bus, but merely demonstrates the traditional operation of a device on a multi-master bus, where transmission is dictated by whether the device controls the bus. In contrast, the instant application allows for second and third devices on the bus to output "data within the given time slot" as recited in claims 1, 24, 93, and 94. More particularly, the given time slot is adjusted according to "variable settings" which can change among other things the size, the timing, and the content of the "output during the given time slot" as recited in claims 93 and 94.

LEVY describes secure data communication over a memory-mapped serial communications interface utilizing a distributed firewall. Contrary to the Examiner's assertion, **LEVY** does not teach or suggest storing settings or variable settings in non-volatile memory devices at col. 18, lines 4-13. Rather **LEVY** discusses the desirability of a CPU node 302 (See Figs. 13 and 14) communicating with a set top box node 316, television node 320, stereo node 322, and VCR node 326. More importantly, the only form of non-volatile memory discussed is "printed" images received by the printer 314 from the various components. Applicants respectfully note that this type of non-volatile "paper" memory is clearly non-analogous art to the instant application.

Respectfully, the applicants provide the following discussion (taken from Col. 18, line 65 - Col. 19, line 13) with respect to Figs. 1-12 of **LEVY** under the belief that the Examiner may have intended to reference the section below in the above-identified final Office Action:

Implementation of a security manager in a PHY layer device utilizes the basic principles described above with respect to FIGS. 1-12, with a few exceptions necessary for the PHY-specific implementation (discussed below) given that at the PHY layer of the IEEE 1394 specification, information is handled on a bit-by-bit basis rather than on a packet-by-packet basis (as with the link layer). Also, compared to a conventional IEEE 1394 PHY layer implementation, it will be appreciated that implementation of a security manager in a PHY layer consistent with the invention may require additional

circuitry in the PHY layer, e.g., **volatile or non-volatile memory within which to store an authorization list and key cache**, packet buffers to buffer data for use by an encryption engine, CRC checksum corrupting circuitry, and other support circuitry that will be apparent to one of ordinary skill in the art. (Col. 18, line 65 – Col. 19, line 13).

Clearly, **LEVY** only discusses the use of **non-volatile memory with respect to storing an authorization list and key cache**, not the “settings relating to the given time slot” as recited in claims 7 and 30 of the instant application. Moreover, the discussion refers to the PHY layer, which is below the layer used and described in the instant application and is therefore arguably non-analogous.

It is accordingly believed to be clear that **DENG** and **LEVY**, whether taken alone or in any combination, do not show or suggest the features of claims 1, 24, 93, and 94. Claims 1, 24, 93, and 94 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1 and 24.

In view of the foregoing, reconsideration and allowance of claims 1-5, 7-28, 30-46, 93, and 94 are solicited.

In the event the Examiner should still find any of the remaining claims to be unpatentable, counsel would appreciate

receiving a telephone call so that, if possible, patentable language can be worked out. In the alternative, the entry of the amendment is requested, as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

Petition for extension is herewith made. The extension fee for response within a period of one month pursuant to Section 1.136(a) in the amount of \$110.00 in accordance with Section 1.17 is enclosed herewith.

If an extension of time is required, petition for extension is herewith made. Any extension fee associated therewith should be charged to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099. Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



For Applicants

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